

The following papers were read:—

1. On a small Collection of Fishes made in the Eastern Watershed of the Transvaal by Capt. G. E. Bruce. By G. A. BOULENGER, F.R.S., F.Z.S.

[Received March 12, 1907.]

(Plates XVIII. & XIX., and Text-figures 90, 91.)

When recently serving in the Transvaal, Capt. G. E. Bruce, 5th Mounted Infantry, was so kind as to respond to an application I made to him in 1905, to preserve some of the fishes in which he was interested, and which I felt sure would prove of considerable scientific value, so little being known of the piscine fauna of the Transvaal. I have now the pleasure of drawing up a list of the species represented in a small collection made by Capt. Bruce and presented by him to the British Museum.

The rugged nature and muddy water of the Transvaal rivers, together with the steep banks overgrown by reeds and rushes, make it very difficult to collect, except by fishing with fly or bait, and the laws against netting and dynamite are very strict. Further, the size of the collecting-jars at Capt. Bruce's disposal precluded the preserving of large specimens. Notwithstanding these restrictions, the collection contains examples of several species not previously recorded from the Transvaal, and of five which are here described as new.

CHARACINIDÆ.

1. HYDROCYON LINEATUS Blkr.

The "Tiger Fish" occurs in the Inkomati and Krokodil Rivers, and appears to be plentiful in all the rivers of the East Coast from the Zambesi to Swaziland.

2. ALESTES IMBERI Peters.

New to the Transvaal, where it was found in the Inkomati River at Komati Poort. First described from the Zambesi, it has since been found in Lake Nyasa, in German East Africa, in the Congo, and in Angola.

3. MICRALESTES ACUTIDENS Peters.

Inkomati River at Komati Poort. Not previously known from south of the Zambesi.

CYPRINIDÆ.

4. BARBUS RAPAX Sldr.

Three specimens from Groot Olifant River agree well with Steindachner's description and figure of a specimen from the

Limpopo River, except for the presence of two pairs of barbels. I cannot help thinking that the absence of anterior barbels in the type specimen is due to an anomaly, or that their presence has been overlooked.

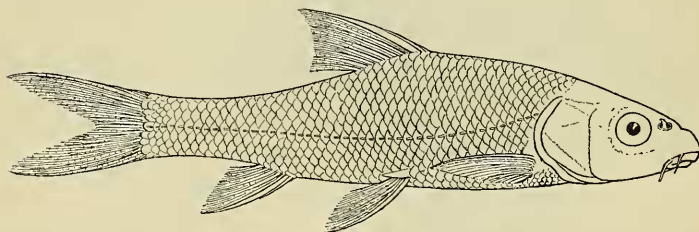
5. *BARBUS EUTENIA* Blgr.

Several specimens from Klein Olifant River. This species, originally described from Angola (*B. kessleri* Gthr. nec Std.), has recently been rediscovered in N.W. Rhodesia by Mr. Neave.

6. *BARBUS POLYLEPIS*, sp. n. (Text-fig. 90.)

Depth of body $4\frac{1}{5}$ times in total length, length of head $3\frac{1}{3}$ times. Snout rounded-subacuminate, 3 times in length of head, feebly projecting beyond mouth; diameter of eye $4\frac{1}{4}$ times in length of head, interorbital width $3\frac{1}{3}$ times; mouth small, inferior, its width 4 times in length of head; lips well developed, lower continuous across chin; two barbels on each side, subequal in length, $\frac{2}{3}$ diameter of eye. Dorsal III 8, last simple ray strong, bony, not serrated, its rigid part $\frac{2}{3}$ length of head; free edge of

Text-fig. 90.



Barbus polylepis.

the fin strongly emarginate; its distance from posterior border of eye equals its distance from caudal. Anal III 5, longest ray $\frac{1}{2}$ length of head, not reaching root of caudal. Pectoral $\frac{2}{3}$ length of head, not reaching ventral; latter below anterior rays of dorsal. Caudal deeply forked, with pointed lobes. Caudal peduncle twice as long as deep. Scales $43\frac{7\frac{1}{2}}{12}$, 5 between lateral line and ventral, 18 round caudal peduncle. Olive-grey above, white beneath.

Total length 120 millim.

A single specimen from Klein Olifant River.

In the Groot Olifant River, Capt. Bruce obtained a large *Barbus*, weighing $3\frac{3}{4}$ lbs., and too large for him to preserve, which, from the notes he has taken, probably represented the adult of the fish here described. Capt. Bruce counted 42 scales in the lateral line, $8\frac{1}{2}$ in a transverse series above the lateral line, and 6 between the latter and the ventral fin. This large specimen further differed in the much longer rays of the anal fin.

7. *BARBUS HOLUBI* Stdr.

Groot Olifant River.

This fish may be the same as *B. natalensis* Castelnau, insufficiently described.

8. *BARBUS BRUCII*, sp. n. (Plate XVIII. fig. 1.)

Depth of body $3\frac{1}{2}$ times in total length, length of head 4 times. Snout rounded-subacuminate, $2\frac{3}{4}$ times in length of head, strongly projecting beyond mouth; diameter of eye 5 times in length of head, interorbital width nearly 3 times; mouth small, inferior, its width $4\frac{1}{2}$ times in length of head; lips strongly developed, lower continuous and forming a rounded mental lobe; two barbels on each side, anterior not quite $\frac{1}{2}$ diameter of eye, posterior $\frac{2}{3}$. Dorsal IV 9, last simple ray strong, bony, not serrated, its rigid part $\frac{2}{3}$ length of head; free edge of the fin strongly emarginate; its distance from centre of eye equals its distance from caudal. Anal III 5, longest ray $\frac{2}{3}$ length of head, not reaching root of caudal. Pectoral $\frac{3}{4}$ length of head, not reaching ventral; latter below middle of base of dorsal. Caudal deeply forked, with pointed lobes. Caudal peduncle once and $\frac{2}{3}$ as long as broad. Scales 29 $\frac{4\frac{1}{2}}{4\frac{1}{2}}$, 2 between lateral line and ventral, 12 round caudal peduncle. "Muddy grey above, white beneath; dorsal yellowish grey; caudal and paired fins bright pink."

Total length 150 millim.

A single specimen from the Groot Olifant River.

9. *BARBUS SECTOR*, sp. n. (Plate XVIII. fig. 2.)

Depth of body $3\frac{1}{2}$ times in total length, length of head $4\frac{1}{3}$ times. Snout rounded, 3 times in length of head, strongly projecting beyond mouth; diameter of eye 4 times in length of head, interorbital width $2\frac{3}{4}$ times; mouth inferior, feebly curved, its width 3 times in length of head, lower jaw with a sharp edge; lower lip restricted to the sides; two barbels on each side, anterior about $\frac{1}{3}$, posterior about $\frac{1}{2}$ diameter of eye. Dorsal IV 9, last simple ray strong, bony, not serrated, its rigid part $\frac{2}{3}$ length of head; free edge of the fin feebly emarginate; its distance from centre of eye equals its distance from caudal. Anal III 5, longest ray $\frac{2}{3}$ length of head, not reaching root of caudal. Pectoral a little shorter than head, not reaching ventral; latter below middle of base of dorsal. Caudal deeply forked, with pointed lobes. Caudal peduncle once and $\frac{3}{4}$ as long as deep. Scales 29 $\frac{4\frac{1}{2}}{4\frac{1}{2}}$, $2\frac{1}{2}$ between lateral line and ventral, 12 round caudal peduncle. "Muddy grey above, white beneath; dorsal yellowish grey; caudal and paired fins bright pink."

Total length 140 millim.

A single specimen from the Groot Olifant River.

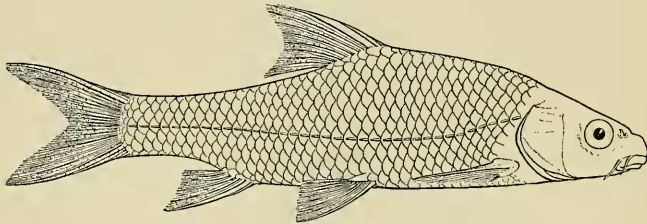
But for the shape of the head and the structure of the mouth, owing to which it should be referred to the genus *Capoita* of

Günther, this fish could not be distinguished from the preceding. Similar cases of close resemblance between species thus referable to *Barbus* and *Capoëta* have been pointed out by me when describing collections from Morocco and East Africa.

10. *BARBUS ELEPHANTIS*, sp. n. (Text-fig. 91.)

Depth of body equal to length of head, 4 times in total length. Snout rounded, 3 times in length of head, projecting beyond mouth; diameter of eye 4 times in length of head, interorbital width twice and $\frac{2}{3}$; mouth inferior, feebly curved, its width $3\frac{1}{2}$ times in length of head, lower jaw with a sharp edge; lower lip restricted to the sides; two barbels on each side, anterior $\frac{2}{3}$ diameter of eye, posterior as long as eye. Dorsal IV 8, last simple ray strong, bony, not serrated, its rigid part $\frac{2}{3}$ length of

Text-fig. 91.



Barbus elephantis.

head; free edge of the fin strongly emarginate; its distance from posterior border of eye equals its distance from caudal. Anal III 5, longest ray $\frac{3}{5}$ length of head, not reaching root of caudal. Pectoral $\frac{3}{4}$ length of head, not reaching ventral; latter below middle of base of dorsal. Caudal deeply forked, with pointed lobes. Caudal peduncle once and $\frac{2}{3}$ as long as deep. Scales $37\frac{6\frac{1}{2}}{5\frac{1}{2}}$, 3 between lateral line and ventral, 14 round caudal peduncle. "Muddy grey above, white beneath; dorsal yellowish grey; caudal and paired fins bright pink."

Total length 155 millim.

A single specimen from Groot Olifant River.

Very similar to the preceding species, but distinguished by longer barbels and smaller scales.

11. *BARBUS TRIMACULATUS* Peters.

Groot and Klein Olifant Rivers and Inkomati River.

12. *BARBUS INERMIS* Peters.

Klein Olifant River.

Previously known from the Zambesi only.

13. *VARICORHINUS BRUCHI*, sp. n. (Plate XIX.)

Body strongly compressed, its depth $3\frac{1}{3}$ times in total length;

length of head $4\frac{1}{2}$ times in total length. Snout rounded, broader than long, $\frac{1}{3}$ length of head; eye lateral, $4\frac{1}{2}$ times in length of head, twice in interorbital width; no conical tubercles on the head; mouth feebly curved, its width 3 times in length of head; two barbels on each side, anterior $\frac{1}{2}$ diameter of eye, posterior as long as eye. Dorsal IV 9, last simple ray strong, bony, not serrated, its rigid part $\frac{2}{3}$ length of head; border of fin concave; longest ray a little shorter than head. Anal III 5, not reaching root of caudal. Pectoral a little shorter than head, not reaching ventral, which is inserted below middle of dorsal. Caudal deeply forked, with pointed lobes. Caudal peduncle twice as long as deep. Scales 31 $\frac{4\frac{1}{2}}{4\frac{1}{2}}$, $2\frac{1}{2}$ between lateral line and ventral, 12 round caudal peduncle. "Back muddy brown, belly white, fins grey."

Total length 170 millim.

A single specimen from Klein Olifant River. "Lives in deep still pools or under big rocks."

Closely allied to the recently described *V. ansorgii* Blgr., from the Kwango River (Congo System) in Angola, which has a deeper body, a shorter caudal peduncle, and the eyes turned more upwards. This is the fifth known African species of *Varicorhinus*.

SILURIDÆ.

14. CLARIAS GARIEPINUS Burchell.

Groot Olifant River.

ANGUILLIDÆ.

15. ANGUILLA BENGALENSIS Ham.-Buch.

Groot Olifant River. The specimen is referable to *A. labiata* Peters.

CICHLIDÆ.

16. HAPLOCHROMIS MOFFATI Casteln.

Groot Olifant River.

17. TILAPIA NATALENSIS M. Web.

Inkomati River, near Komati Poort.

18. TILAPIA SPARRMANI A. Smith.

Groot and Klein Olifant Rivers.

EXPLANATION OF THE PLATES.

PLATE XVIII.

Fig. 1. *Barbus brucei*, p. 309.

2. ,, *sector*, p. 309.

a. Mouth seen from below.

PLATE XIX.

Varicorhinus brucei, p. 310, with upper view of head and mouth seen from below.